

REMARKS

The original Abstract has been cancelled and has been rewritten as a single paragraph. The Abstract was further amended to cancel the reference to "Fig. 2" and to otherwise improve its form.

The specification has been amended in order to provide the customary headings, such as --Background of the Invention--, etc., to correct a minor informality noted at page 5, line 22 thereof and to otherwise improve its form.

Claims 1, 2 and 5-8 were amended in order to improve their form, but without materially altering the scope thereof, wherefore these amendments will require no further consideration and/or search by the Patent and Trademark Office. Claim 4 was amended so as to better define the invention claimed therein. Claim 3 was rewritten into independent form.

Claims 9-20 were added in order to provide applicants with protection commensurate in scope with the invention disclosed.

Claims 1, 2, 4 and 5 were rejected under 35 USC 102(e) as being anticipated by Liu (USP 6,188,292).

At the outset, applicants request that the Patent and Trademark Office take notice of 35 USC 132, which states, in part, that whenever a claim for a patent is rejected, the director shall notify the applicant, stating the reasons for such rejection, together with such information and references as may be useful in

judging the propriety of continuing the prosecution of the application.

The Office Action of 3/31/03 does not provide such information as may be useful to applicants regarding further prosecution of the application. For example, the Patent and Trademark Office cites columns 3-5 of the Liu patent in order to provide factual support for the "102" rejection of claims 1, 2, 4 and 5. This broadbrush citation is not very helpful to applicants. The Office Action should specifically cite those portions of the applied reference that allegedly meet and describe each of the elements in the aforesaid claims.

The Office Action alleges that Liu discloses a quadrature coupled oscillator, citing Figs. 2 and 3 of the reference. But it is not clear from these figures that they make up a quadrature coupled oscillator, and there is no discussion or citation of facts by the Patent and Trademark Office to factually support the Patent and Trademark Office opinion statement on this issue. Nor does it appear that the disclosure in columns 3-5 of Liu mentions a quadrature coupled oscillator. The next Office Action should factually clarify this issue.

Furthermore, it is not clear from the Office Action as to which elements of the Liu apparatus make up the claimed voltage controlled current sources. Please note that the stages 210, 212 of the reference are identified as coupling modules and are not a

part of either oscillator 1 or oscillator 2, nor are they described as a voltage controlled current source. In addition, the Office Action does not even identify the element or elements that make up the resonators claimed in claim 1 of this application, yet another failure of the Patent and Trademark Office to carry its burden of proof under 35 USC 102.

And the Office Action also does not factually show that the Liu device includes the subject matter in the last paragraph in claim 1, e.g. the phase shifters coupled to respective voltage controlled current source circuits and which shift the phase of a current supplied by the VCCS to the resonator etc.

For all of the above reasons, and more, the Office Action does not provide the factual support required for a valid prima facie case of anticipation of claim 1 under 35 USC 102.

If the Patent and Trademark Office persists in this ground of rejection, then the next Office Action should specifically cite those portions of any reference that factually support such rejection.

As to claim 2, the Abstract of Liu clearly discloses a "first and a second fixed frequency oscillator coupled in a ring topology", whereas claim 2 calls for means for controlling the oscillation frequency of the astable multivibrator circuits etc. In Liu, a frequency variation is achieved by varying the coupling between the two oscillators (see the Liu Abstract), which is not

the same thing as controlling the oscillation frequency of astable multivibrator circuits etc. Claim 2 is not anticipated by Liu because the Office Action does not set out the factual evidence requisite for a prima facie case of anticipation. Once again, if the Patent and Trademark Office persists in this ground of rejection, then the next Office Action should specifically cite those parts of any applied reference that allegedly disclose such subject matter.

Claim 4 was amended above so that it now specifies that the LC circuit comprises at least a discrete inductor and a discrete capacitor, which the Patent and Trademark Office implicitly admits is not taught by the Liu patent. Amended claim 4 is patentable over the ring topology oscillator of Liu.

As to claim 5, the Patent and Trademark Office alleges that Liu discloses mutual inductive LC circuits made up of L1, 2, L3, 4. But there is no indication in Fig. 3 of Liu that such inductors are mutually inductively coupled, and since the Office Action does not provide a specific citation in the reference specification that allegedly discloses such mutual inductive coupling, it is clear that the Office Action does not make out a prima facie case of anticipation since it is devoid of the requisite factual support. As before, if the Patent and Trademark Office persists in its rejection, then the next Office Action should specifically cite

those portions of any applied reference that disclose the aforesaid subject matter.

Claims 9-20 are patentable for the general reasons advanced above as well as for other novel features recited therein. For example, claim 9 calls for means for controlling the oscillation frequency of the oscillator, which is similar to claim 2 and is unobvious for reasons similar to those advanced above as to the latter claim.

Claim 10 calls for a resonator circuit that comprises a parallel resonant LC circuit, which is not apparent in the Liu patent. The LC circuit resonator with maximum current flow at the oscillation frequency, as specified in claim 11, also is not disclosed in Liu.

Claim 12 includes subject matter similar to claim 1 comprising voltage controlled current sources, phase-shifters etc.

Claim 13 is patentable in view of the claimed means for controlling the oscillation frequency of the oscillator by control of the resonant frequency of the resonator etc. The LC circuit with variable capacitor of claim 14 is novel over Liu, as is the further claimed feature of claim 15.

Claim 16 requires that the control of the resonator resonant frequency controls the oscillation frequency of its respective oscillation circuit, which is not true of the Liu device. The claimed resonator of claim 17 is not apparent in Liu.

The LC circuit of claim 18 provides the desirable advantage that the oscillation frequency of the oscillator is independent of the particular fabrication technology, a feature worthy of a patent.

Claim 19 provides a similar advantage over the Liu apparatus.

Claim 20 recites a fixed coupling between the two circuit modules, whereas the Liu patent relies on a variable coupling in order to achieve the objects of his invention.

In view of the incomplete nature of the Office Action, as discussed above in relation to claims 1, 2, 4 and 5, the next Office Action in this application should not be made final.

Please charge the cost of any additional fees in connection with the above amendment to Deposit Account No. 14-1270.

Reexamination and allowance of the application are respectfully requested.

Respectfully submitted,

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On June 30, 2003
By Elsa De Lucey